



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/631,863	08/01/2003	Shinpei Okajima	SN-US035080	9166
22919	7590	09/06/2005	EXAMINER	
SHINJYU GLOBAL IP COUNSELORS, LLP 1233 20TH STREET, NW, SUITE 700 WASHINGTON, DC 20036-2680			BELLINGER, JASON R	
			ART UNIT	PAPER NUMBER
			3617	

DATE MAILED: 09/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/631,863	<b>Applicant(s)</b> OKAJIMA, SHINPEI	
	<b>Examiner</b> Jason R. Bellinger	<b>Art Unit</b> 3617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 23 June 2005.
- 2a) ☒ This action is FINAL.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,5-17 and 21-36 is/are pending in the application.
- 4a) Of the above claim(s) 8-11 and 23-25 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 5-7, 12-17, 21-22, 26-36 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

*ku*

***Claim Objections***

1. Claim 17 is objected to because of the following informalities: A colon (:) should be inserted at the end of line 2 for clarity. Appropriate correction is required.

***Claim Rejections - 35 USC § 103***

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
3. Claims 1, 5, 12-16, and 34-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Michelotti. Michelotti shows a bicycle rim having an outer annular portion 1 adapted to receive a tire thereon, the outer annular portion 1 including an outer opening. The rim also includes an inner annular portion 2 that is fixedly coupled to the outer annular portion 1 to form an annular hollow area therebetween, and further having an inner opening, which is aligned with the outer opening.

A first tubular attachment portion (namely the radially outer portion of bushing 4) is fixedly coupled to the outer annular portion 1 at the outer opening, and a second tubular attachment portion (namely the radially inner portion of bushing 4) is fixedly coupled to the inner annular portion 2 at the inner opening. The first and second tubular attachment portions (of bushing 4) define a spoke-receiving space with an internal surface configured and dimensioned to secure and end 12 of a spoke 10 within the space.

The first and second tubular spoke attachment portions (of bushing 4) have rim abutment surfaces that contact a radially facing surface of the rim to limit radial movement relative to the rim.

While Michelotti does not show the first and second tubular spoke attachment portions (of the bushing 4) being heat fused (i.e. by welding or brazing) to a respective one of the outer 1 and inner 2 annular portions of the rim, Michelotti does disclose that the tubular spoke attachment portions (of the bushing 4) are riveted to the corresponding portions of the rim. It is well known in the art that heat fusing techniques (such as welding and brazing) provide a more secure and permanent connection means between one or more elements than riveting techniques. It would therefore have been obvious to one of ordinary skill in the art at the time of the invention to heat fuse (i.e. weld or braze) the first and second tubular spoke attachment portions (of the bushing 4) to the outer 1 and inner 2 annular portions of the rim, as an equivalent fastening means, in order to form a permanent connection between the bushing and the rim, thus reinforcing the rim while eliminating friction or relative movement between the bushing and rim (which would reduce wear on both the bushing and the rim).

There is a plurality of bushings 4 (and thus a plurality of first and second tubular spoke attachment portions, etc.) connected to the rim. The first tubular attachment portion is integrally formed with the second tubular attachment portion as a one-piece member 4 having a longitudinally extending internal passageway that forms one of the spoke-receiving spaces. The first tubular attachment portion is at least partially located within the outer attachment opening, while the second tubular attachment portion is at

Art Unit: 3617

least partially located within the inner attachment opening. The first tubular attachment portion extends radially inwardly from the outer annular portion 1 into the hollow area 3 of the rim, while the second tubular attachment portion extends radially outwardly from the inner annular portion 2 into the hollow area 3 of the rim.

Michelotti shows both the first and second tubular spoke attachment portions 4 include a rim abutment surface (namely the riveted flanges) that contacts a radially facing surface of the rim to limit radial movement of the rim. The each of the first tubular spoke attachment portions are identical to each other, while each of the second tubular spoke attachment portions are identical to each other.

Michelotti does not specify that the first and second tubular spoke attachment portions 4 are formed from the same material as the outer annular 1 and inner annular 2 portions of the rim, respectively. However, it would have been obvious to one of ordinary skill in the art at the time of the invention to form the first and second tubular spoke attachment portions from the same material as that of the rim (since both the outer and inner portions are of the same material), in order to form a wheel from a single material, thus reducing material and machining costs.

4. Claims 6-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Michelotti as applied to claims 1, 5, 12-16, and 34-36 above, and further in view of Mercat et al ('344 B). Michelotti shows the internal passageway(s) being a through bore(s). However, Michelotti does not show the internal passageway(s) being at least partially threaded.

In Figure 7, Mercat et al teaches the use of a bushing 18 that connects to both an outer and inner annular portion of a rim (see Figure 9) that includes an internal passageway that is a through bore, and is threaded 21. Therefore from this teaching, it would have been obvious to one of ordinary skill in the art at the time of the invention to provide the internal passageway(s) of the bushing of Michelotti with threads in order to secure a spoke having an externally threaded spoke nipple, since threaded and non-threaded spoke nipples are equivalent means for fastening spokes to a rim.

Michelotti as modified by Mercat et al (specifically Michelotti) shows a plurality of spokes 10 having an outer end portion (attached to a spoke nipple 12), an inner end portion (not shown, but inherently there), and an elongated central portion that extends between the end portions. Both end portions are integrally formed with the elongated central portions (see Mercat et al, Figure 11).

5. Claims 17, 21-22, 26-29, and 31-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Michelotti in view of Mercat et al as applied to claims 6-7 above, and further in view of Munson.

Michelotti as modified by Mercat et al does not show the outer end of the spokes being directly threaded within the spoke-receiving spaces.

Munson teaches the use of a spoke E that is directly threaded into a spoke-receiving space of an element G engaging the rim F. Therefore from this teaching, it would have been obvious to one of ordinary skill in the art at the time of the invention to

Art Unit: 3617

directly thread the spoke into the spoke-receiving space of Michelotti as modified by Mercat et al, in order to reduce the numbers of parts in the bicycle wheel assembly.

6. Claim 30 is rejected under 35 U.S.C. 103(a) as being unpatentable over Michelotti in view of Mercat et al and in further view of Munson as applied to claims 17-22, 26-29, and 31-33 above, and further in view of Hinsberg et al. Michelotti as modified by Mercat et al and Munson do not show the inner end portions of the spokes including a threaded shaft section that is integrally formed with the elongated central portion as a one-piece, unitary member so that the threaded shaft section is threadably coupled to a spoke nipple mounted on the central hub of the wheel.

Hinsberg et al teaches the use of a one-piece, unitary spoke 7 having a threaded shaft section coupled to a central hub 8 through a spoke nipple 12. Therefore from this teaching, it would have been obvious to one of ordinary skill in the art at the time of the invention to provide the spoke of Michelotti as modified by Mercat et al and Munson with a threaded shaft section threadably coupled to a spoke nipple mounted on the central hub, for the purpose of providing a means for adjusting the tension of the spokes to provide a balanced wheel.

### ***Response to Arguments***

7. Applicant's arguments filed 23 June 2005 have been fully considered but they are not persuasive. The Applicant argues that there is no motivation to modify Michelotti to heat fuse both the first and second tubular spoke attachment portions to the rim. The

Art Unit: 3617

Applicant argues that since Michelotti does not disclose that the tubular spoke attachment portions are riveted to both the inner and outer portions of the rim, it would not be obvious to then substitute the riveting method with the heat fusing method for securing the attachment portions to the rim portions.

While Michelotti does not specify that the first spoke attachment portion is riveted to the outer portion of the rim, one of ordinary skill in the art would have found it obvious to do so, in order to prevent relative movement between spoke attachment portions. This would reduce wear on the parts. Furthermore, this riveting would be a duplication of parts. Heat fusing the spoke attachment portions to the rim portions, as opposed to riveting them, would seal both ends of the spoke attachment portion, thus sealing the rim from contaminants such as water and debris; thus reducing corrosion and/or damage to the rim. Therefore, one of ordinary skill would find heat fusing the spoke attachment portions to the rim an obvious and more beneficial substitution with riveting.

### ***Conclusion***

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not

Art Unit: 3617

mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason R. Bellinger whose telephone number is 571-272-6680. The examiner can normally be reached on Mon - Thurs (9:00-4:30).


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Morano can be reached on 571-272-6684. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jason R Bellinger  
Examiner  
Art Unit 3617



jrb



S. JOSEPH MORANO  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 3600